



Honors Geometry
Unit 5 Assignment Sheet
Relationships within Triangles



Day	Date	Topics	Homework
1	Mon., 10/4	"5-1" Midsegments "5-2" Bisectors in Triangles	p. 246 6, 12, 16, 20, 28, 30-36 E p. 251 2, 6, 8; 12-16 E; 28, 30, 46
2	Tues., 10/5	"5-3" Concurrent Lines incenter; circumcenter; centroid; orthocenter ** "5-5" Inequalities In Triangles	p. 259 4-16 E omit 10; 19-22 all; 27-29 all p. 276 2-26 E omit 6, 10, 14, 24 also do 32-38 E <i>Bring your textbook to class tomorrow.</i>
3	Wed., 10/6	Review: Chapter Review p. 281 (1-22; 31-42)	Chapter Test p. 284 (1-24)
4	Thurs., 10/7	***Unit 5 Quiz***	Review of Solving Inequalities: Independent Practice: p. 272 2-32 evens

Review: Extra Practice
p. 694 (1-30 all)

Review of Solving Inequalities:
Independent Practice: p. 272 2-32 evens

**Crunchy – circumcenter This may help you to remember the names for the points of
Peanut - perpendicular concurrency. Feel free to make up one you like better.
Butter - bisector
Is - incenter
Always – angle
Better - bisector
On - orthocenter
A - altitude
Chocolate - centroid
Muffin - median





Unit 5: Vocabulary:

altitude	coordinate proof	inscribed in
centroid	distance from a point to..	inverse
circumcenter of a triangle	a line	median of a triangle
circumscribed about	equivalent statements	midsegment
concurrent	incenter of a triangle	negation
contrapositive	direct proof	orthocenter of a triangle
	indirect reasoning	point of concurrence

Theorems:

Triangle Midsegment Theorem: If a segment joins the midpoints of two sides of a triangle, then the segment is parallel to the third side and half of its length.

Perpendicular Bisector Theorem: If a point is on the perpendicular bisector of a segment, then it is equidistant from the endpoints of the segment.

Converse of the Perpendicular Bisector Theorem: If a point is equidistant from the endpoints of a segment, then it is on the perpendicular bisector of the segment.

Angle Bisector Theorem: If a point is on the bisector of an angle, then the point is equidistant from the sides of the angle.

Converse of the Angle Bisector Theorem: If a point in the interior of an angle is equidistant from the sides of an angle, then it lies on the angle bisector.

Theorem: The perpendicular bisectors of the sides of a triangle are concurrent at a point equidistant from the vertices of the triangle.

Theorem: The bisectors of the angles of a triangle are concurrent at a point equidistant from the sides of the triangle.

Theorem: The medians of a triangle are concurrent at a point that is two-thirds the distance from each vertex.

Theorem: The lines that contain the altitudes of a triangle are concurrent.

Comparison Property of Inequality: If $a = b + c$ and $c > 0$, then $a > b$.

Theorem: If two sides of a triangle are not congruent, then the larger angle lies opposite the larger side.

Theorem: If two angles of a triangle are not congruent, then the longer side lies opposite the larger angle.

Triangle Inequality Theorem: The sum of the lengths of two sides of a triangle is greater than the length of the third side.

	\perp Bisectors	\angle Bisectors	Lines containing altitudes	Medians
Point of Concurrence	circumcenter	incenter	orthocenter	centroid
Acute Triangle	inside	inside	inside	inside
Right Triangle	on	inside	on	inside
Obtuse triangle	outside	inside	outside	inside

